

QB365 Question Bank Software Study Materials

Hydroxy Compounds and Ethers 50 Important 1 Marks Questions With Answers (Book Back and Creative)

12th Standard

Chemistry

Total Marks : 50

Multiple Choice Question


50 x 1 = 50

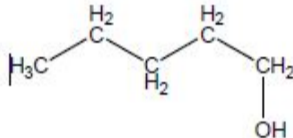
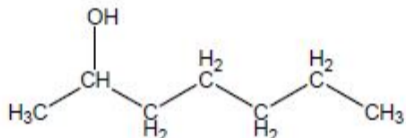
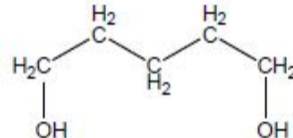
1) An alcohol (x) gives blue colour in victormayer's test and 3.7g of X when treated with metallic sodium liberates 560 mL of hydrogen at 273 K and 1 atm pressure what will be the possible structure of X?

- (a) **CH₃ CH (OH) CH₂CH₃** (b) CH₃ - CH (OH) - CH₃ (c) CH₃ - C (OH) - (CH₃)₂ (d) CH₃- CH₂ -CH (OH) - CH₂ - CH₃

2) Which of the following compounds on reaction with methyl magnesium bromide will give tertiary alcohol.

- (a) benzaldehyde (b) propanoic acid (c) **methyl propanoate** (d) acetaldehyde

3)  $\xrightarrow[\text{ii) H}_2\text{O}_2 / \text{OH}^-]{\text{i) BH}_3 / \text{THF}}$ X The X is _____.

- (a)  (b)  (c)  (d) None of these

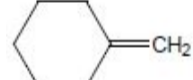
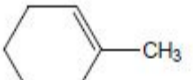
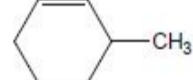
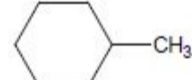
4) In the reaction sequence, Ethane $\xrightarrow{\text{HOCl}}$ A \xrightarrow{x} ethan -1, 2 - diol. A and X respectively are _____.

- (a) Chloroethane and NaOH (b) ethanol and H₂SO₄ (c) **2 - chloroethan -1-ol and NaHCO₃** (d) ethanol and H₂O

5) Which one of the following is the strongest acid.

- (a) 2 - nitrophenol (b) 4 - chlorophenol (c) **4 - nitrophenol** (d) 3 - nitrophenol

6)  on treatment with Con H₂SO₄, predominately gives _____.

- (a)  (b)  (c)  (d) 

7) Carbolic acid is _____.

- (a) **Phenol** (b) Picric acid (c) benzoic acid (d) phenylacetic acid

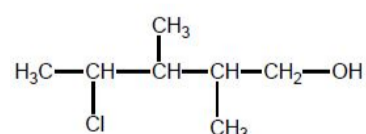
8) Which one of the following will react with phenol to give salicylaldehyde after hydrolysis.

- (a) Dichloro methane (b) trichloroethane (c) **trichloro methane** (d) CO₂

9) (CH₃)₃-C-CH(OH) CH₃ $\xrightarrow{\text{con H}_2\text{SO}_4}$ X (major product)

- (a) (CH₃)₃ CCH = CH₂ (b) **(CH₃)₂C = C (CH₃)₂** (c) CH₂= C(CH₃)CH₂-CH₂- CH₃ (d) CH₂= C (CH₃) - CH₂- CH₂- CH₃

10) The correct IUPAC name of the compound

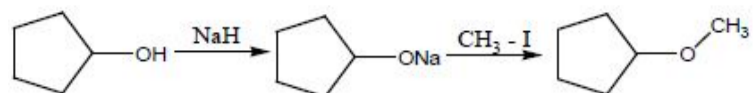


- (a) **4 - chloro - 2,3 - dimethyl pentan - 1-ol** (b) 2,3 - dimethyl - 4- chloropentan -1-ol
(c) 2,3,4 - trimethyl - 4- chlorobutan -1-ol (d) 4- chloro - 2,3,4 - trimethyl pentan - 1-ol

11) In the reaction Ethanol $\xrightarrow{\text{PCl}_5}$ X $\xrightarrow{\text{alc.KOH}}$ Y $\xrightarrow[\text{298K}]{\text{H}_2\text{SO}_4/\text{H}_2\text{O}}$ Z. The 'Z' is _____.

- (a) ethane (b) ethoxyethane (c) ethylbisulphite (d) **ethanol**

12) The reaction



Can be classified as _____.

- (a) dehydration (b) Williams on alcohol synthesis (c) **Williamson ether synthesis** (d) dehydrogenation of alcohol

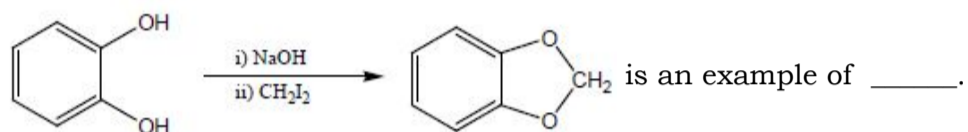
13) HO CH₂ CH₂ - OH on heating with periodic acid gives _____.

- (a) methanoic acid (b) Glyoxal (c) **methanol** (d) CO₂

14) Which of the following compound can be used as antifreeze in automobile radiators?

- (a) methanol (b) ethanol (c) Neopentyl alcohol (d) **ethan -1, 2-diol**

15) The reactions



- (a) Wurtz reaction (b) cyclic reaction (c) **Williamson reaction** (d) Kolbe reactions

16) One mole of an organic compound (A) with the formula C₃H₈O reacts completely with two moles of HI to form X and Y. When Y is boiled with aqueous alkali it forms Z. Z answers the iodoform test. The compound (A) is _____.

- (a) propan - 2-ol (b) propan -1-ol (c) ethoxy ethane (d) **methoxy ethane**

17) Among the following ethers which one will produce methyl alcohol on treatment with hot HI?

- (a) (H₃C)₃C-O-CH₃ (b) (CH₃)₂-CH-CH₂-O-CH₃ (c) CH₃-(CH₂)₃-O-CH₃ (d) **CH₃-CH₂-CH(O-CH₃)-CH₃**

18) Williamson synthesis of preparing dimethyl ether is a / an _____.

- (a) SN¹ reactions (b) **SN² reaction** (c) electrophilic addition (d) electrophilic substitution

19) On reacting with neutral ferric chloride, phenol gives _____.

- (a) red colour (b) **violet colour** (c) dark green colour (d) no colouration.

20) Isopropylbenzene on air oxidation in the presence of dilute acid gives _____.

- (a) C₆H₅COOH (b) C₆H₅COCH₃ (c) C₆H₅COC₆H₅ (d) **C₆H₅- OH**

21) Which one of the following would not react with cone. HCl and anhy. ZnCl₂ at room temperature?

- (a) (CH₃)₃COH (b) (CH₃)₂CHOH (c) $\text{CH}_3 - \text{CH}_2 - \underset{\text{CH}_3}{\text{CH}} - \text{OH}$ (d) **CH₃ - CH₂ - CH₂ - OH**

22) The reactivity of alcohols with respect to oxidation decreases with _____.

- (a) increase in α - H (b) **decrease in α - H** (c) increase in β - H (d) decrease in β - H

23) Intermolecular hydrogen bonding in ethylene glycol leads to its _____.

- (a) high viscosity (b) high boiling point (c) hygroscopic nature (d) **all the above**

24) The carbinol name of
 $\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3 - \text{C} - \text{OH} \\ | \\ \text{CH}_3 \end{array}$

- (a) ethyl propyl carbinol (b) ethyl methyl carbinol (c) **trimethyl carbinol** (d) dimethyl isopropyl carbinol

25) Ethanol mixed with 5% methanol is known as _____.

- (a) methylated spirit (b) denature spirit (c) **both (a) and (b)** (d) neither (a) nor (b)

26) Which among the following has both local anaesthetic and antiseptic properties?

- (a) benzyl benzoate (b) phenol **(c) benzyl alcohol** (d) n-propyl alcohol
- 27) Which of the following is not correct? Glycerol is used as _____.
(a) sweetening agent (b) moisturizing creams (c) copying inks and stamp pad inks **(d) coolant in aeroplane engines**
- 28) Diethyl ether can be decomposed with _____.
(a) HI (b) KMnO_4 (c) NaOH (d) H_2O
- 29) $\text{RX} + \text{NaOH}(\text{aq}) \xrightarrow{\Delta} \text{ROH} + \text{NaX}$. The above reaction proceed by _____ mechanism.
(a) nucleophilic addition (b) elimination (c) electrophilic substitution **(d) nucleophilic substitution**
- 30) The general formula for aliphatic ether is _____.
(a) $\text{C}_n\text{H}_{2n+2}\text{O}$ (b) $\text{C}_n\text{H}_{2n}\text{O}$ (c) $\text{C}_n\text{H}_{2n-2}\text{O}$ **(d) $\text{C}_{2n}\text{H}_{2n+1}\text{O}$**
- 31) On oxidation of an alcohol gives an aldehyde having the same number of carbon atoms as that of alcohol is _____.
(a) 1° alcohol (b) 2° alcohol (c) 3° alcohol (d) None
- 32) The alcohol obtained by the hydrolysis of oils and fats is _____.
(a) pentanol (b) propanol **(c) glycerol** (d) glycol
- 33) An example of trihydric alcohol is _____.
(a) trimethyl carbinol (b) 3-hexanol **(c) propane-1,2,3-triol** (d) tert-butylalcohol
- 34) When ether is exposed to air for sometime an explosive substance produced is _____.
(a) peroxide (b) oxide (c) TNT (d) superoxide
- 35) Ether is formed when alkylhalide is treated with sodium alkoxide, this method is known as _____.
(a) Hoffmann reaction **(b) Williamson's synthesis** (c) Wurtz synthesis (d) Kolbe's reaction
- 36) 1 - methoxy propane and 2 - methoxy propane are _____.
(a) chain isomers (b) position isomers **(c) metamers** (d) functional isomers
- 37) Diethyl ether reacts with excess of HI to form _____.
(a) $\text{C}_2\text{H}_5\text{OH}$ and H_2O **(b) $\text{C}_2\text{H}_5\text{I}$ and H_2O** (c) $\text{C}_2\text{H}_5\text{I}$ and $\text{C}_2\text{H}_5\text{OH}$ (d) $\text{C}_2\text{H}_5\text{OH}$ and I_2
- 38) The number of alcohol isomers for molecular formula $\text{C}_4\text{H}_{10}\text{O}$ is _____.
(a) 7 (b) 10 (c) 3 **(d) 4**
- 39) Lower halogenated ethers can be converted into higher ethers by using _____ reagent.
(a) Grignard (b) Tollen's (c) Fehling's (d) none of the above
- 40) On heating, peroxides are _____.
(a) stable (b) unstable (c) decomposes violently **(d) both (b) and (c)**
- 41) When ethanol reacts with Grignard reagent the product is _____.
(a) 1° alcohol **(b) 2° alcohol** (c) 3° alcohol (d) Ketone
- 42) Primary alcohols undergo dehydration by _____ mechanism
(a) $\text{S}_{\text{N}}1$ (b) $\text{S}_{\text{N}}2$ (c) E_1 **(d) E_2**
- 43) Which one is used to stop the oxidation reaction at the aldehyde or Ketone stage?
(a) $\text{K}_2\text{Cr}_2\text{O}_7$ (b) KMnO_4 **(c) PCC** (d) HNO_3

- 44) To detoxify the alcohol, the enzyme produced by the liver is _____.
(a) ADH (b) NAD (c) PCC (d) HNO_3
- 45) On catalytic dehydrogenation tertiary alcohol undergoes _____.
(a) Dehydrogenation (b) Hydrogenation **(c) Dehydration** (d) Oxidation
- 46) When glycol is heated at 773 K gives _____.
(a) ethene (b) ethanal **(c) oxirane** (d) 1,4 - dioxane
- 47) Oxidation of glycerol with Fenton's reagent gives _____.
(a) meso oxalic acid **(b) glycerose** (c) glyceric acid (d) tartronic acid
- 48) The acidic nature of alcohol is due to the polar nature of _____.
(a) C-C bond (b) C-H bond **(c) O-H bond** (d) H-H bond
- 49) Which one is an example for aromatic ether?
(a) methoxy ethane (b) ethoxy ethane **(c) methoxy benzene** (d) 2-methoxypropane
- 50) Which is slightly soluble in H_2O ?
(a) Phenol (b) Alkanes (c) Alcohols (d) Alkenes